

REMARKS:

Claims 1-6 and 8-25 are pending. Claims 1-6 and 8-25 are rejected.

Claim Amendment

Claims 1-25 are canceled without prejudice or disclaimer.

Claims 26-49 are newly added. These claims are supported throughout the specification and claims as originally filed.

No new matter is added.

Comments

The Examiner asserts:

“Orchard **fails to teach** providing a **feedback in response to said gesture detection** to confirm to a user that said gesture was detected.

Tierling teaches providing a feedback in response to said gesture detection to confirm to a user that said gesture was detected. (see Tierling col. 1, lines 50-60” (emphasis added).

Consider the disclosure of Tierling:

“Typically, the **computer updates the environment in response to the user's manipulation** of a manipulandum or user object such as a joystick handle or mouse, and provides visual and audio feedback to the user. The computer senses the user's manipulation of the user object using sensors provided on the interface device.

In some interface devices, haptic feedback is also provided to the user. These types of interface devices can provide physical sensations which are felt by the user manipulating the user object of the interface device. One or more motors or other actuators are coupled to the device housing or manipulandum and are connected to the controlling computer system. The **computer system controls forces output by the actuators in conjunction and coordinated with displayed events**. The computer system can thus **convey physical force sensations** to the user in conjunction with other supplied feedback **as the user is grasping or contacting** the interface device or manipulatable object of the interface device.

In many haptic feedback devices, the haptic feedback takes the form of vibrations, jolts, or pulses output on the housing or manipulandum which are experienced by the user, referred to as "tactile" sensations herein. For example, many gamepad devices include a spinning eccentric mass that creates inertial vibrations on the housing or object. Other devices, such as the I-Feel Mouse from Logitech Corp., provide inertial vibrations using a linearly-moving mass. Still other devices may vibrate a housing or object by impacting or directly moving the

housing or object with the actuator” (Col. 1, lines 34-62, emphasis added).

Clearly, Tierling teaches conveying “physical force sensations” “in conjunction and coordinated with displayed events”. There is no disclosure or suggestion that the “feedback” is “based upon the first tapping gesture”. Rather, Tierling teaches that “physical force sensations” are conveyed “as the user is grasping or contacting the interface device”. It appears the computer “updates the environment” based on the input. Presumably, the “physical force sensations” conveyed “in conjunction and coordinated with displayed events” are provided based on the updated environment.

Additionally, Tierling does not disclose or suggest that the “physical force sensations” are provided “to **confirm** the first tapping gesture was **detected**” as in claim 1..

The Examiner asserts that Rosenberg teaches:

“a controller coupled together with said sensor and said tactile feedback generator and **configured to respond to a detection of at least one tap** to activate said tactile feedback generator **to confirm to the user that the tap was detected**. (see Rosenberg, col. 11, lines 20-40” (emphasis added).

The Applicant respectfully asserts that the Examiner has misinterpreted the teachings of Rosenberg. Consider the following portions of Rosenberg:

“FIG. 7 is a top elevational view of the touchpad 16 of the present invention. Touchpad 16 can in some embodiments be used simply as a positioning device, where the entire area of the pad provides cursor control. In other embodiments, different regions of the pad can be designated for different functions. In some of these region embodiments, each region can be provided with an actuator located under the region, while other region embodiments may use a single actuator that imparts forces on the entire pad 16. In the embodiment shown, a central cursor control region 70 is used to position the cursor.

The cursor control region 70 of the pad 16 can **cause forces to be output on the pad based on interactions of the controlled cursor with the graphical environment and/or events in that environment**. The user **moves a finger** or other object within region 70 to correspondingly move the cursor 20. Forces are preferably associated with the interactions of the cursor with displayed graphical objects. For example, a jolt or “pulse” sensation can be output, which is a single impulse of force that quickly rises to the desired magnitude and then is turned off or quickly decays back to zero or small magnitude. The touchpad 16 can be jolted in the z-axis to provide the pulse. A vibration sensation can also be output, which is a time-varying force that is typically periodic. The vibration can cause the touchpad 16 or portions thereof to oscillate back and forth on the z axis, and can

be output by a host or local microprocessor to simulate a particular effect that is occurring in a host application.

Another type of force sensation that can be output on the touchpad 16 is a texture force. This type of force is similar to a pulse force, but depends on the position of the user's finger on the area of the touchpad and/or on the location of the cursor in the graphical environment. Thus, **texture bumps are output depending on whether the cursor has moved over a location of a bump in a graphical object**. This type of force is spatially-dependent, i.e. a force is output depending on the location of the cursor as it moves over a designated textured area; when the cursor is positioned between "bumps" of the texture, no force is output, and when the cursor moves over a bump, a force is output. This can be achieved by host control (e.g., the host sends the pulse signals as the cursor is dragged over the grating). In some embodiments, a separate touchpad microprocessor can be dedicated for haptic feedback with the touchpad, and the texture effect can be achieved using local control (e.g., the host sends a high level command with texture parameters and the sensation is directly controlled by the touchpad processor). In other cases a texture can be performed by presenting a vibration to a user, the vibration being dependent upon the current velocity of the user's finger (or other object) on the touchpad. When the finger is stationary, the vibration is deactivated; as the finger is moved faster, the frequency and magnitude of the vibration is increased. This sensation can be controlled locally by the touchpad processor (if present), or be controlled by the host. Local control by the pad processor may eliminate communication burden in some embodiments. Other spatial force sensations can also be output. In addition, any of the described force sensations herein can be output simultaneously or otherwise combined as desired" (emphasis added).

Rosenberg describes "texture bumps are output depending on whether the cursor has moved over a location of a bump in a graphical object" and "cursor control region 70 of the pad 16 can cause forces to be output on the pad based on interactions of the controlled cursor with the graphical environment and/or events in that environment". Rosenberg does not disclose or suggest "in response to detecting the first tapping gesture, providing a tactile feedback to confirm the gesture was detected, where the feedback is based upon the first tapping gesture".

The Examiner is respectfully requested to allow all of the pending claims 26-49 as now presented for examination.

S.N.: 10/750,525
Art Unit: 2174

850.0003.U1(US)

Respectfully submitted:



Ricardo Ochoa

Reg. No.: 61,545

Customer No.: 29,683



Date

HARRINGTON & SMITH, PC

4 Research Drive

Shelton, CT 06484-6212

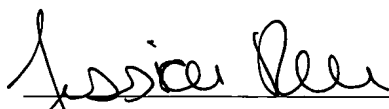
Telephone: (203) 925-9400

Facsimile: (203) 944-0245

Email: ROchoa@HSPatent.com

CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Mail Stop Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.



Name of Person Making Deposit



Date